

CLAIMS

Sub 193
1. A method for producing an aqueous resin dispersion composition comprising:
 preparing a monomer mixture containing a first monomer having a carboxyl group and a second monomer having a hydrophobic group, the monomer mixture containing the first monomer in a proportion of 10 to 75% by mole;
 forming a macromonomer by radical polymerizing the monomer mixture at a temperature of from 180 to 350°C;
 neutralizing the macromonomer to obtain a neutralized macromonomer having an ethylenically unsaturated bond at least at one end thereof; and
 emulsion polymerizing at least one vinyl monomer in an aqueous solvent using the neutralized macromonomer as an emulsifier.

2. The method according to claim 1, wherein the emulsion polymerizing includes:

 preparing an aqueous solution of the neutralized macromonomer; and

 adding at least one vinyl monomer continuously or intermittently to the aqueous solution of the neutralized macromonomer.

3. The method according to claim 1, wherein the emulsion polymerizing includes:

 preparing an dispersion solution including the neutralized macromonomer, at least one vinyl monomer and water; and

 adding the dispersion solution continuously or intermittently to a reactor vessel charged with water.

4. The method according to claim 1, wherein the emulsion polymerizing includes:

 starting emulsion polymerization reaction by charging the neutralized macromonomer, at least one vinyl monomer and water to a reactor vessel.

5. The method according to claim 1, wherein the emulsion polymerizing includes:

preparing a neutralized macromonomer solution;

placing water and a part of the neutralized macromonomer solution in a reactor vessel; and

adding a vinyl monomer and the rest of the neutralized macromonomer solution continuously or intermittently to the reactor vessel.

Sub A
6. The method according to any one of claims 1 to 5, wherein a base selected from the group consisting of ammonia and a low boiling-point amine compound having a boiling point of 140°C or lower is used in the neutralizing.

7. The method according to any one of claims 1 to 5, wherein the neutralized macromonomer has a number average molecular weight of 500 to 5000.

8. The method according to any one of claims 1 to 5, wherein the amount of the neutralized macromonomer used in the emulsion polymerizing is 0.5 to 80 parts by weight, per 100 parts by weight of the vinyl monomer.

9. The method according to any one of claims 1 to 5, wherein the first monomer is at least one compound selected from the group consisting of acrylic acid, methacrylic acid, crotonic acid, vinylacetic acid, acryloxypropionic acid, maleic acid, fumaric acid, mesaconic acid, citraconic acid, itaconic acid, and maleic anhydride.

10. The method according to any one of claims 1 to 5, wherein the second monomer is at least one compound selected from the group consisting of monomers having solubility to water of 2 wt% or less at 20°C.

Sub A4

11. The method wherein the mac at least at two

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